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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,205

11/12/2003

Ebrahim Andideh

ITL.1008US (P15533)

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01/10/2006

TROP PRUNER & HU, PC
8554 KATY FREEWAY
SUITE 100
HOUSTON, TX 77024

EXAMINER

HUR, JUNG H

ART UNIT

PAPER NUMBER

2824

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,205

Applicant(s)

ANDIDEH ET AL.

Examiner

Jung (John) Hur

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
4a) Of the above claim(s) 14-26 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 and 27-36 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/2/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: search history.

DETAILED ACTION

1. Claims 1-36 are pending in the application.

Election/Restrictions

2. Applicant's election without traverse of claims 1-13 and 27-36 in the reply filed on 20 October 2005 is acknowledged.

Claims 14-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 20 October 2005.

The restriction requirement is therefore made FINAL.

Information Disclosure Statement

3. Acknowledgment is made of applicant's Information Disclosure Statement (IDS) Form PTO-1449, filed 02 February 2004. The information disclosed therein has been considered.

Specification

4. Claims 1, 27, 28 and 36 are objected to because of the following informalities:

In claim 1, line 2, "a first" should be --a first layer-- (for clarification).

In claim 1, line 4, "a first" should be --a first address line-- (for clarification).

In claim 27, line 7, "said first and said second layers" is understood as --said at least two layers--.

In claim 28, line 1, "a third and fourth address line" should be --third and fourth address lines--.

In claim 36, line 2, "a top surface" appears to be referring to "an upper surface" in claim 27, line 5, and is understood as such.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Fricke et al. (U.S. Pat. Appl. Pub. No. 2003/0185048).

Regarding claim 1, Fricke, for example in Figs. 12-16, 20 and 21, discloses a memory comprising: a first layer and a second layer (for example, layers 52 and 54 in Fig. 13) of memory material (including 24a and 24b) spaced from one another (by ILD) in a first direction (vertical direction); and a first address line and a second address line (18a and 18b) extending substantially in said first direction (vertical direction) through said first and second layers (see Fig. 13).

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Regarding claims 2-13, Fricke further discloses that said memory material includes a ferroelectric polymer material (see paragraph [0044], line 16);

including third and fourth address lines (row 1 and row 2 in Fig. 12, as applied to layer 52 in Fig. 13) which extend in a second direction (perpendicular to the first direction) different from said first direction (see Fig. 13);

wherein said first and second directions are substantially transverse to one another (perpendicular or orthogonal; see Fig. 13);

wherein said third and fourth address lines are in said first layer (layer 52 in Fig. 13);

including a first cell formed in said first layer between said first and third address lines (the storage element 24 between 18a and row 1 in Fig. 12, as applied to layer 52 in Fig. 13) and a second cell formed in said first layer between said second and fourth address lines (the storage element 24 between 18b and row 2 in Fig. 12, as applied to layer 52 in Fig. 13);

wherein a bicell of two cells is formed in said first layer on opposed sides of said third address line (the two storage elements between row 1 and 18a and between row 1 and 18b in Fig. 12, as applied to layer 52 in Fig. 13);

wherein said bicell is formed between said first and second address lines (between 18a and 18b), and wherein said bicell includes said third address line (row 1 in Fig. 12, as applied to layer 52 in Fig. 13);

having more than two lines (for example, row 0, row 1, row 2, 18a and 18b in Figs. 12 and 13);

having more than two layers (for example, layers 52, 54 and 56 in Fig. 13);

wherein said layers are vertically stacked (see Fig. 13);

wherein successive layers are spaced by an insulator (the insulator layer ILD in Figs. 12 and 13);

wherein said lines are vias (see for example paragraph [0049], line 16) extending vertically (see for example Figs. 13, 20 and 21), said memory including a substrate (10 in Figs. 20 and 21) having a surface (including an upper/top surface), said first direction being substantially transverse to said surface (i.e., 18a and 18b extend perpendicularly from the upper/top surface of the substrate).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fricke et al. (U.S. Pat. Appl. Pub. No. 2003/0185048) in view of Tuttle et al. (U.S. Pat. No. 5,448,110).

Regarding claims 27-36, Fricke discloses a memory of claims 1-13 as above (with said first and second address lines in claim 1 as a plurality of first address lines in claim 27), and further disclose a system (see Figs. 24 and 25) comprising: a controller (74 or 92); an interface (72) coupled to said controller; and said memory (80 or 96) coupled to said controller (see paragraphs [0077] and [0078]).

Fricke does not disclose that the interface is a wireless interface, including a dipole antenna.

Tuttle, for example in Fig. 1A, discloses a system comprising: a controller (including 15); a wireless interface (including 12-14, and a dipole antenna 4 and 5) coupled to said controller; and a ferroelectric memory (16; see also column 2, lines 44-46) coupled to said controller; wherein said interface includes a dipole antenna (4 and 5; see column 6, lines 11-50).

Since systems comprising a wireless interface with a dipole antenna and a memory coupled to a controller were common and well known in the art (as exemplified in Tuttle), it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the memory of Fricke in systems with a wireless interface with a dipole antenna (such as that of Tuttle), for the purpose of providing a nonvolatile memory with an increased density and a faster access time in such systems (see for example Fricke, paragraph [0001], lines 23-25).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Seyyedy (U.S. Pat. No. 5,969,380)

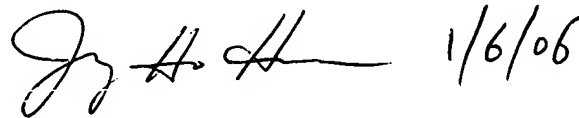
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung (John) Hur whose telephone number is (571) 272-1870.

The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung (John) Hur
Patent Examiner
Art Unit 2824

jhh